DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MONOMONAC, LAKE	Lake Area (ha): 287.78
Town: RINDGE	Maximum depth (m): 7.8
County: Cheshire	Mean depth (m): 2.8
River Basin: Connecticut	Volume (m ³): 8093500
Latitude: 42°43'15" N	Relative depth: 0.4
Longitude: 71°59'30" W	Shore configuration: 2.86
Elevation (ft): 1044	Areal water load (m/yr): 10.13
Shore length (m): 17200	Flushing rate (yr^{-1}) : 3.60
Watershed area (ha): 5037.	7 P retention coeff.: 0.55
% watershed ponded: 1.	2 Lake type: artificial

BIOLOGICAL:	12 February 1992	30 August 1991
DOM. PHYTOPLANKTON (% TOTAL) #:	ASTERIONELLA 95%	CHRYSOSPHAERELLA 20%
#:	2	PERIDINIUM 20%
#:	3	STAURASTRUM 20%
PHYTOPLANKTON ABUNDANCE (cells/mL		430
CHLOROPHYLL-A (µg/L)		5.83
DOM. ZOOPLANKTON (% TOTAL) #:	SYNCHAETA 27%	KERATELLA 32%
#:	NAUPLIUS LARVAE 27%	KELLICOTTIA 15%
. #:	3	NAUPLIUS LARVAE 15%
ROTIFERS/LITER	22	91
MICROCRUSTACEA/LITER	19	57
ZOOPLANKTON ABUNDANCE (#/L)	44	148
VASCULAR PLANT ABUNDANCE		Common/Abun
SECCHI DISK TRANSPARENCY (m)		2.7
BOTTOM DISSOLVED OXYGEN (mg/L)	10.6	1.3
BACTERIA (fecal col., #/100 ml) #		
#:	2	
#:	В	

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL: Lake: MONOMONAC, LAKE Town: RINDGE				LAKE
	12 February 1992 30 August 1991			ust 1991
DEPTH (m)	2.0	4.0	2.5	5.5
pH (units)	5.8	5.4	6.2	5.6
A.N.C. (Alkalinity)	1.7	1.7	1.5	1.5
NITRATE NITROGEN	0.06	0.04	< 0.05	< 0.05
TOTAL KJELDAHL NITROGEN				
TOTAL PHOSPHORUS	0.008	0.008	0.014	0.013
CONDUCTIVITY (µmhos/cm)	58.8	59.1	56.4	54.7
APPARENT COLOR (cpu)	48	46	45	70
MAGNESIUM			0.50	
CALCIUM			1.9	
SODIUM			6.6	
POTASSIUM			0.54	
CHLORIDE	10	11	10	9
SULFATE	6	6	4	4
TN : TP				
CALCITE SATURATION INDEX			4.6	

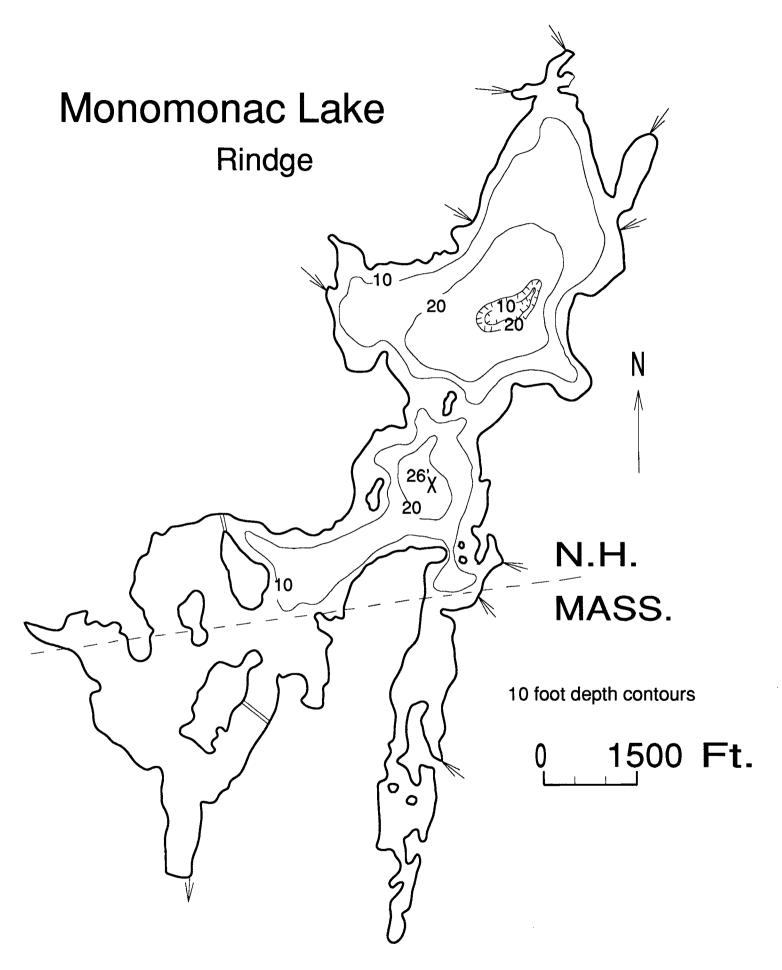
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	4	1	8	Meso.

COMMENTS:

- 1. Also spelled Monomonoc.
- 2. Access is a boat ramp at a marina off Rt. 202.
- 3. This lake was previously surveyed in 1976. Only one station was sampled in 1991 versus two stations in 1976. The 1991 station is listed as STN A, although its location was a little south of the 1976 Stn A.
- 4. There was no change in trophic classification and little change in water quality between the two sampling dates.
- 5. The water color was a dark tea color.
- 6. Cryptomonads (55%) was the dominant class of wholewater plankton, and was comprised of equal numbers of <u>Chroomonas</u> and <u>Cryptomonas</u>.



FIELD DATA SHEET

LAKE: MONOMONAC, LAKE TOWN: RINDG DATE: 08/30/91 WEATHER: SUNNY & HOT TOWN: RINDGE

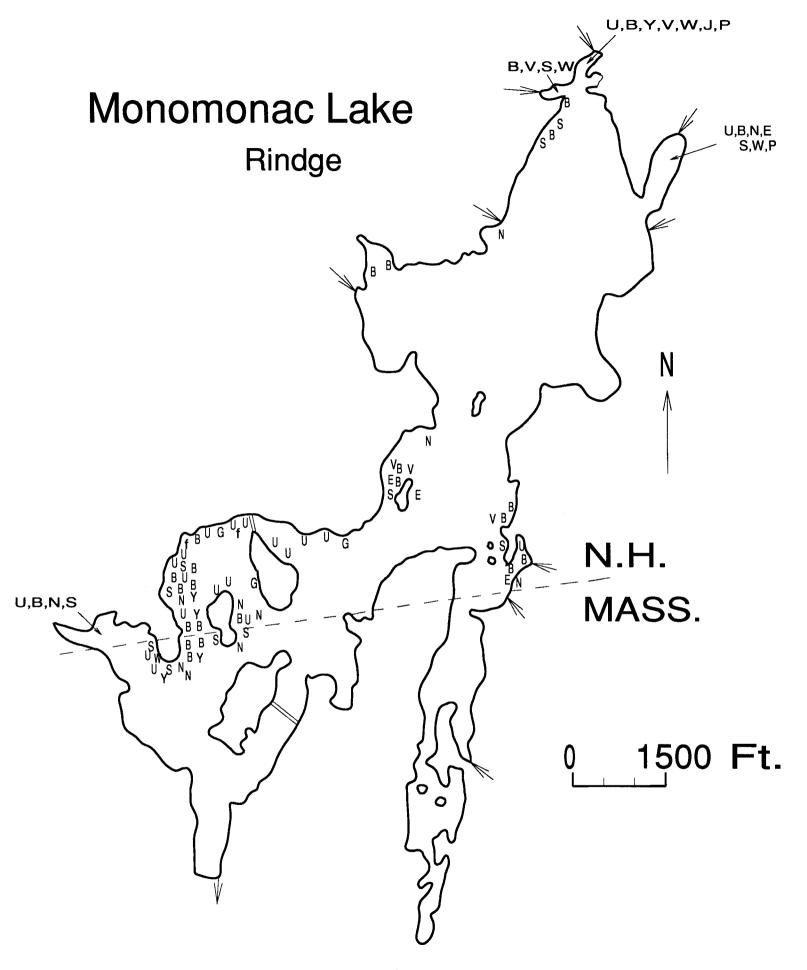
:	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	24.5	8.2	97 %
	1.0	24.0	8.2	97 %
	2.0	24.0	8.2	97 %
	3.0	22.5	7.8	88 %
	4.0	20.0	5.1	56 %
	5.0	20.0	4.3	47 %
	6.0	19.0	3.6	38 %
	7.0	18.0	1.3	14 %
+				
_				
-+				
-+				

SECCHI DISK (m): 2.7 COMMENTS:

BOTTOM DEPTH (m): 7.2

TIME: 1200

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: MONOMONAC, LAKE	TOWN: RINDGE	DATE: 08/30/91		
		PLANT NAME			
Key	GENERIC	COMMON	ABUNDANCE		
U	Utricularia	Bladderwort	Common/Abun		
В	Brasenia schreberi	Water shield	Common/Abun		
Y	Nuphar	Yellow water lily	Scattered		
N	Nymphaea	White water lily	Common		
G	Gramineae	Grass family	Sparse		
E	Eriocaulon septangulare	Pipewort	Sparse		
v	Vallisneria americana	Tape grass	Common		
S	Sparganium	Bur reed	Scattered		
W	Potamogeton	Pondweed	Scattered		
J	Juncus	Rush	Scattered		
P	Pontederia cordata	Pickerelweed	Sparse		
f	Chlorophyceae	Filamentous green algae	Scattered		
		N			
OVERALL ABUNDANCE: Common/Abun					

GENERAL OBSERVATIONS:

- 1. Plants were abundant to very abundant in the coves but sparse to scattered along much of the open shoreline; thus, an overall rating of common/abundant.
- 2. Plants appeared to be less abundant than in 1976; however, it was not possible to see the bottom even a few feet from shore because of the dark water color. Bladderwort may have been more widespread than depicted on the map.